Male Sling: A Decade Later

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Urethral compression provided by a male sling is not a new concept. A variety of urethral compression procedures have been applied in an attempt to control urinary incontinence over the years. Most notable were the Kaufman procedures which used silicone gel prosthesis to compress the ventral urethra. In the last decade various slings have emerged as popular alternative to the gold standard artificial urinary sphincter (AUS). The modern sling evolved from the bulbo-urethral sling of Schaeffer et al. to slings being used currently.

New Developments in Male Sling in the Last Decade

1. Introduction of BAMS (InVance) by AMS in 2001. This sling provides mechanical compression of bulbar urethra through placement of a synthetic mesh which is secured to the inferior pubic ramus using six titanium bone anchors.

2. Removal of BAMS from the market. The American Medical Systems (AMS) no longer offers BAMS for clinical use.

3. Introduction of trans-obturator sling (AdVance) by AMS in 2007. This is a self-anchored sling using a polypropylene mesh tape placed in a transobturator fashion. The sling is secured at the bulbar urethra with continence achieved through elevation of the urethra.

4. Introduction of quadratic sling (Virtue) by Coloplast in 2009. This sling combines the concept of BAMS and trans-obturator sling using four mesh arms. Two arms are placed in trans-obturator fashion and other two are passed in pre-pubic manner. Thus providing elevation and compression of bulbar urethra.

5. Introduction of next generation AdVance-XP sling which received Canadian approval in 2011 but has not been approved by FDA in US. The enhancement includes a new mesh design, longer arms for larger patients, Chevron anchoring mechanism and Tyvek sleeve liner to protect anchors.

Conclusion

Male sling surgery continues to evolve as more and more interest is generated in expanding alternative less invasive surgical options for patients. An ideal sling still does not exist and long term results of currently approved slings in this country are still awaited.